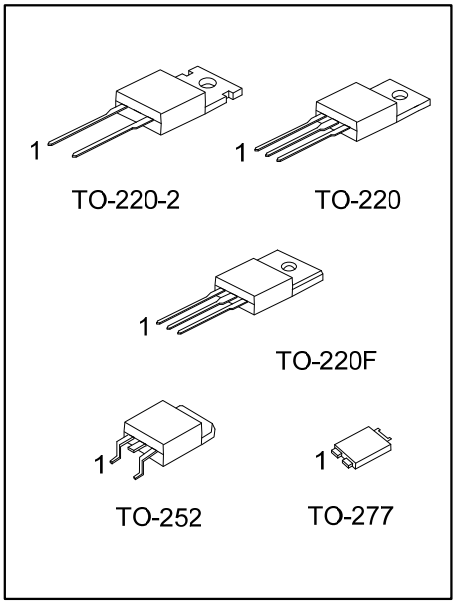
MGBR10S60

Preliminary ***DIODE***

MOS GATED BARRIER RECTIFIER



■ DESCRIPTION

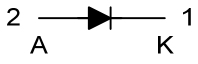
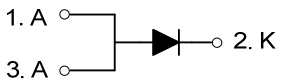
The UTC **MGBR10S60** is a mos gated barrier rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high current capability, etc.

The UTC **MGBR10S60** suitable for free wheeling, high frequency inverters, polarity protection, and low voltage.

■ FEATURES

* Super low forward voltage drop
* High current capability
* High surge capability
* High efficiency

■ SYMBOL

TO-220-2	TO-220 / TO-220F TO-252 / TO-277
	

■ ORDERING INFORMATION

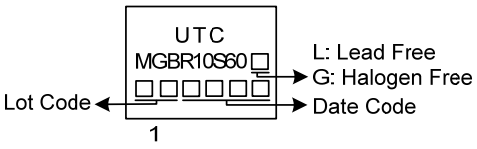
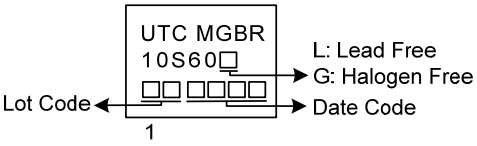
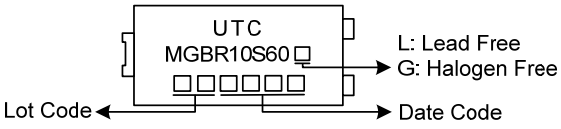
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MGBR10S60L-TA2-T	MGBR10S60G-TA2-T	TO-220-2	K	A	-	Tube
MGBR10S60L-TA3-T	MGBR10S60G-TA3-T	TO-220	A	K	A	Tube
MGBR10S60L-TF3-T	MGBR10S60G-TF3-T	TO-220F	A	K	A	Tube
MGBR10S60L-TN3-R	MGBR10S60G-TN3-R	TO-252	A	K	A	Tape Reel
MGBR10S60L-T27-R	MGBR10S60G-T27-R	TO-277	A	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

MGBR10S60G-TA2-T
(1)Packing Type
(2)Package Type
(3)Green Package

(1) T: Tube, R: Tape Reel
(2) TA2: TO-220-2, TA3: TO-220, TF3: TO-220F, TN3: TO-252, T27: TO-277
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

PACKAGE	MARKING
TO-220-2 TO-220 TO-220F	
TO252	
TO-277	

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage (Note 1)	V_{RM}	60	V
Working Peak Reverse Voltage	V_{RWM}	60	V
Peak Repetitive Reverse Voltage	V_{RRM}	60	V
Average Rectified Output Current	I_O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	70	A
Operating Junction Temperature	T_J	-65 ~ +150	°C
Storage Temperature	T_{STG}	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS (PER LEG)

PARAMETER		SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	TO-220 TO-220-2	θ_{JC}	2	°C/W
	TO-220F		4	°C/W
	TO-252		6	°C/W
	TO-277		13 (Note)	°C/W

Note: FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T_A=25°C unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R=0.50mA	60			V
Instantaneous Forward Voltage	V_{FM}	I_F=10A, T_C=25°C			0.59	V
		I_F=10A, T_C=125°C			0.49	V
Leakage Current	I_{RM}	V_R=60V, T_C=25°C			500	μA
		V_R=60V, T_C=125°C			50	mA

Notes: 1. Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%.
2. Mounted on an FR-4 PCB, 2 oz Copper. Minimum recommended pad layout.